PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P31872-P0	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/JP 03/13797	International filing date *(day/month/year)* 28.10.2003	Priority date *(day/month/year)* 30.10.2002
International Patent Classification (IPC) or both national classification and IPC G11B27/32		
Applicant MATSUSHITA ELECTRIC INDUSTRIAL CO.,LTD. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 13 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
24.05.2004	25.01.2005
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Sucher, R Telephone No. +49 89 2399-2148

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/JP 03/13797

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-3, 8-38	as originally filed
4, 4a, 5, 6, 6a, 7, 7a	received on 22.11.2004 with letter of 22.11.2004

Claims, Numbers

1-14	received on 22.11.2004 with letter of 22.11.2004

Drawings, Sheets

1/11-11/11	as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-14
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-14
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-14
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

   D1: PATENT ABSTRACTS OF JAPAN vol. 1999, no. 08, 30 June 1999 & JP 11 086512 A (NEC CORP), 30 March 1999;
   D2: PATENT ABSTRACTS OF JAPAN vol. 1998, no. 08, 30 June 1998 & JP 10 083658 A (SONY CORP), 31 March 1998.

2. Document D1 discloses (see the abstract and par. 0018-0023 in conjunction with fig. 3) a recording method for recording data into an information recording medium (rewriting type optical disk), wherein the number of rewrites into the same area is limited, comprising

   performing a search for unallocated areas in an information recording area and retaining, in a memory, unallocated area identifying information for identifying at least one unallocated area found by the search (step S31, reading positional information and size information on a free space from non-record section information, see also fig. 2),

   determining whether or not an unallocated area satisfying a record request is present among the at least one unallocated areas identified by the unallocated area identifying information (step S32, asking for the size of the data to be written, and step S33, judging whether writing to a non-record section is possible based on the free space), and

   when an unallocated area satisfying a record request is present among the at least one unallocated areas identified by the unallocated area identifying information, allocating the unallocated area as an area for recording data and recording data into the allocated area (steps S35 and S36, recording of data to the non-record section and changing the corresponding non-record section information).

   From this, the subject-matter of claim 1 differs by

   searching for a new user file recorded in at least one allocated area,

   generating a pointer indicating a position based on an end position of an area in which the new user file is recorded,

   wherein the search for unallocated areas is performed from a position following the position indicated by the pointer in a fixed direction.

By starting the search for unallocated areas from an end position of an area in which a new user file is recorded, the time for searching unallocated areas can be reduced.

Document D2 discloses to write new file information in an empty sector of a file information recording area (70) successively and additively after old file information in order to decrease the number of rewrites into the same area of an optical disk. However, the search for an empty sector after old file information is always started from the beginning of the file information recording area (see par. 0043 and 0044 in conjunction with fig. 8, sector number i=0, track number j=0). Since the file information recording area (70) is small (2048 tracks of 64 sectors) compared to the user data area (80) which corresponds to the "information recording area" of claim 1, there is no motivation to use an additional pointer for starting the search as defined in the claim. Thus, even a combination of the teachings of documents D1 and D2 would not result in the subject-matter of claim 1 which therefore appears to involve an inventive step in the sense of Article 33(3) PCT.

The same statement also applies to claim 13 defining the corresponding recording apparatus.

3. Claims 2-12 and 14 are dependent on claims 1 and 13, respectively, and as such also meet the requirements of the PCT with respect to novelty and inventive step.